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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,580	02/09/2001	Gerard Hotier	PET1913	5248

23599 7590 05/23/2005

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EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/762,580

Applicant(s)

HOTIER ET AL.

Examiner

Ivars C. Cintins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18, 20-22, 24 and 25 are rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling. It appears essential that the panels in Applicant's system contain only a single distribution chamber (i.e. C<sub>i</sub>) in order to function in the intended manner. See the following portions of the specification: page 1, lines 6-7; page 5, lines 1-2; page 6, lines 19-20; page 13, lines 2-3; etc. Since this feature has not been recited in 1-18, 20-22, 24 and 25, these claims are not enabled by the disclosure. *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). It is noted that claim 1 recites that "at least one panel" comprises a single distribution chamber; however, it appears from Applicant's disclosure that all of the panels must have only a single distribution chamber.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18 and 20-25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1-18, 20-22, 24 and 25 fail to recite the apparently essential limitation that all of the panels in the recited system have only a single distribution chamber; and therefore, these claims fail to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 18, 20, 21 and 25 are also deemed to be incomplete since it appears that all of the recited secondary fluids must be injected into and extracted from the adsorbent beds, not just one of these fluids as encompassed by the term

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“and/or,” in order to produce the recited separation of constituents from the feed stream.

Furthermore, the term “comprise a single ...” (claim 23, line 2) is vague and indefinite as to the limitation intended, since the term “comprise” suggests that other distribution chambers could be present in the panel, but the term “single” appears to preclude the presence of such other distribution chambers.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 13, 17, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Haase (U.S. Patent No. 4,378,292). As pointed out in the previous Office action, the reference discloses a device comprising a plurality of adsorbent beds separated by a fluid distribution plate (20 & 21) comprising panels having a single distribution chamber (4), a plurality of lines (6) for extraction or injection of fluids, a bypass circuit having a bypass line (5) which communicates with the distribution chamber (4) and also with a zone (3) distinct from a distribution chamber (see Fig. 1); and this is all that is required by claims 1, 23 and 24. This reference also discloses upper (14) and lower (15) grids for the fluid distribution plate, as required by claim 13; and a central mast (2) as required by claim 17.

Claims 18, 20, 21 and 25 are again rejected under 35 U.S.C. 102(e) as being anticipated Ferschneider et al. (U.S. Patent No. 6,146,537). As pointed out in the previous Office action, the

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reference discloses separating paraxylene from aromatic hydrocarbons of the type recited (see col. 8, lines 22-23) with a simulated moving bed system comprising bypass lines ( $L_{i,j}$ ) which are connected to zones of an adsorbent bed (i.e.  $CH_j$ ) distinct from distribution chambers  $CH_i$  so as to inject part of the main fluid in these zones; and this is all that is required by claims 18, 20, 21 and 25.

Applicant's arguments filed February 28, 2005 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that Haase does not anticipate claims 1, 13, 17, 23 and 24 because the adsorbent in Haase is not isolated in a bed. It is pointed out, however, that the adsorbent material in this reference is clearly divided into a plurality of separate areas (beds) by the separation members (i.e. pans 4). See Fig. 1; and col. 2, lines 13-14.

Applicant also argues that Haase does not teach the recited bypass circuit because "pan (4) is not seen to be a zone of the adsorbent bed." Again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that since the adsorbent bed of this reference is contained between upper and lower plates 9, the dividing pans 4 of this reference device are deemed to be zones within the adsorbent bed.

With respect to the Ferschneider et al. reference, Applicant argues that the language "connected to a zone of an adsorbent bed distinct from *distribution chambers* ( $C_j$ )" overcomes this reference. It is pointed out, however, that only one end of each bypass line in this reference system is connected to distribution chambers containing the subscript "i" since the other end of these bypass lines is connected to distribution chambers containing the subscript "j." In any event, Applicant is advised that an amendment to claims 18, 20, 21 and 25 reciting that all of the

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panels include only a single distribution chamber would overcome the above rejection based on Ferschneider et al.

Claims 2-12, 14-16 and 22 would be allowed if amended to overcome the above rejections under 35 U.S.C. § 112, and if further rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
May 16, 2005